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**PRELIMINARY ASSESSMENT/
VISUAL SITE INSPECTION**

**NATIONAL METALCRAFTERS
ROCKFORD, ILLINOIS**

ILD 047 032 750

FINAL REPORT

Prepared for

**U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Waste Programs Enforcement
- Washington, DC 20460**

Work Assignment No.	:	C05087
EPA Region	:	5
Site No.	:	ILD 047 032 750
Date Prepared	:	November 4, 1991
Contract No.	:	68-W9-0006
PRC No.	:	009-C05087-IL17
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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

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REPLY TO ATTENTION OF:
5HR-12

June 4, 1991

Mr. Joe Zuzul
National Metalcrafters
4500 Kishwaukee St.
Rockford, IL 61125-7005

esd

Re: Visual Site Inspection
National Metalcrafters
ILD 047 032 750

Dear Mr. Zuzul:

The United States Environmental Protection Agency (U.S. EPA) Region V will conduct a Preliminary Assessment and Visual Site Inspection (PA/VSI) at the referenced facility. This inspection is conducted pursuant to the Resource Conservation and Recovery Act, as amended (RCRA) and the Comprehensive Environmental Response, Compensation, and Liability Act, as amended (CERCLA). The PA/VSI requires identification and systematic review of all solid waste streams at the facility. The objective of the PA/VSI is to determine whether or not releases of hazardous wastes or hazardous constituents have occurred or are occurring at the facility which may require further investigation. This analysis will also provide information to establish priorities for addressing any confirmed releases.

The visual site inspection of your facility is to verify the location of all solid waste management units (SWMUs) and areas of concern to make a cursory determination of their condition by visual observation. The VSI supplements and updates data gathered during a preliminary file review. During this site inspection, no samples will be taken. A sampling visit to ascertain if releases of hazardous waste or constituents have occurred may be required at a later date.

Assistance of some of your personnel may be required in reviewing solid waste flow(s) or previous disposal practices. The site inspection is to provide a technical understanding of the present and past waste flows and handling, treatment, storage, and disposal practices. Photographs of the facility are necessary to document the condition of units at the facility and the waste management practices used.

The VSI has been scheduled for June 13, 1991. The inspection team will consist of Michael Gorman and G. P. Singh of Resource Applications, Inc., contractors for the U.S. EPA.

Representatives of the Illinois Environmental Protection Agency may also be present. Your cooperation in admitting and assisting them while on site is appreciated.

The U.S. EPA recommends that personnel who are familiar with present and past manufacturing and waste management activities be available during the VSI. Access to any relevant maps, diagrams, hydrogeologic reports, environmental assessment reports, sampling data sheets, manifests and/or correspondence is also necessary, as such information is needed to complete the PA/VSI. Enclosed is a summary of our current knowledge and data gaps.

If you have any questions, please contact me at (312) 886-4448 or Sheri Bianchin at (312) 886-4446. A copy of the Preliminary Assessment/Visual Site Inspection Report, excluding the conclusions portion may be made available upon request.

Sincerely yours,

Sheri L. Bianchin

for Kevin M. Pierard, Chief
OH/MN Technical Enforcement Section

Enclosure

cc: Bob Wengrow, IEPA - Rockford
Larry Eastep, IEPA - Land Pollution Control Division

ATTACHMENT

National Metalcrafters

4500 Kishwaukee St.

Rockford, IL 61125-7005

PROBABLE SOLID WASTE MANAGEMENT UNITS (SWMUs)

1. An October 31, 1985 letter from National Metalcrafters to the U.S. EPA stated that your company generated four categories of waste. They were: pickle liquor; zinc sludge; plating sludge, and oil. Please list all additional waste management units at your facility. If possible, please provide as complete information for the waste units in response to the questions below.

From the list of probable SWMUs please address the following questions:

- Do the above SWMUs still exist at the facility and are they in operation?
 - What are the start-up and closure dates of the above SWMUs?
 - What types of wastes are the SWMUs currently/formerly used for?
 - Name any SWMUs at your facility that have not been listed above. These would include hazardous waste storage areas, treatment units, or any other area or system at your facility dealing with hazardous waste.
2. Please supply as much information as possible concerning the site history. This would include any information you have regarding any other owner/operators at this location.
 3. Please provide a description of the primary processes taking place at your facility and the waste streams which are generated.
 4. Describe the methods of treatment and disposal of generated waste utilized by your facility.

If available, the following items are requested:

- A detailed map of the facility showing the location of the SWMUs and production stations.
- Flow diagrams showing waste streams and waste management practices.

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- B - VISUAL SITE INSPECTION SUMMARY AND PHOTOGRAPHS
- C - VISUAL SITE INSPECTION FIELD NOTES
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EXECUTIVE SUMMARY

Resource Applications, Inc. (RAI) performed a preliminary assessment and visual site inspection (PA/VSI) to identify and assess the existence and likelihood of releases from solid waste management units (SWMU) and other areas of concern (AOC) at the National MetalCrafters (MetalCrafters) facility in Rockford, Illinois. This report summarizes the results of the PA/VSI and evaluates the potential for releases of hazardous wastes or hazardous constituents from SWMUs and AOCs identified. In addition, a completed U.S. Environmental Protection Agency (EPA) Preliminary Assessment Form (EPA Form 2070-12) is included in Attachment A to assist in prioritization of RCRA facilities.

MetalCrafters produces nickel plated and copper coated fasteners for the automotive industry. The facility covers 32 acres and has been in operation since 1958. MetalCrafters is classified as a generator with the primary wastes consisting of spent acids (K062), nickel cake (F006), TCE (F001), zinc plating cake, wastewater, and oil. The nickel cake and TCE are kept in the Hazardous Waste Storage Area (SWMU 2); the spent acid is stored in the Hazardous Waste Storage Tank (SWMU 1), and waste oil is stored in a Waste Oil Storage Tank (SWMU 6). All wastes are kept less than 90 days. The entire facility is surrounded by an 8-foot high chain link fence.

The PA/VSI identified the following 11 SWMUs and 2 AOCs at the facility:

Solid Waste Management Units

1. Hazardous Waste Storage Tank
2. Hazardous Waste Storage Area
3. Upper Wastewater Treatment Unit
4. Lower Wastewater Treatment Unit
5. Zinc Plating Filter Press
6. Waste Oil Storage Tank
7. Waste Oil Satellite Accumulation Areas
8. Dumpster Waste Storage Area
9. Barium Waste Storage Area
10. Cyanide Storage Area
11. Scrap Copper Storage Truck

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Area of Concern

1. Underground Storage Tank (UST)
2. Hydrochloric Acid Tank

Currently, the potential for release of hazardous constituents to air, soil, ground water, or surface water is low. SWMUs 9 and 10 are no longer used and all wastes have been removed from these units. At the time of the VSI (June 13, 1991) SWMUs 1, 4, and 5 were expected to cease

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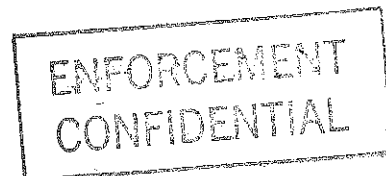
operations. A return visit to the facility on July 24, 1991 confirmed that the SWMUs ceased operating on June 28, 1991. A pipe is used to drain rain water from the secondary containment berm surrounding SWMU 1 and this drain was the site of at least one release of spent acid to the soil. Results from soil sampling taken in this area are pending. A release of virgin hydrochloric acid occurred at the product storage tank. The contaminated soil was excavated and disposed of in a landfill. A release to the soil of spent quenching oil killed the vegetation in a 130-square foot area. The contaminated soil was removed and disposed of in a landfill. At the time of the VSI, vegetation had reappeared in the spill area.

MetalCrafters is located in a primarily industrial area. The Greater Rockford Airport borders the facility to the south and residential areas are located approximately 1/4 mile to the southeast. The facility is surrounded by a chain link fence.

The City of Rockford receives its water supply from a shallow sandstone aquifer located at a depth of 100 feet and extending to 300 feet. The nearest municipal well is located approximately 2.2 miles southwest and down-gradient of the facility. Other than the Rock River 1/2 mile west of the facility and the Kishwaukee River located 2 miles south of the facility, there are no wetlands or sensitive environments within two miles of the facility.

If results from soil samples taken around SWMU 1 reveal acidic contamination, then the ground water should also be sampled for acidic contamination. Soil samples should be taken around the UST to determine if a methanol release has occurred. Since the soil samples taken in the area of the Hydrochloric Acid Tank revealed high pH levels, the soil should be re-sampled to verify the initial results.

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1.0 INTRODUCTION

PRC Environmental Management, Inc. (PRC), received Work Assignment No. C05087 from the U.S. Environmental Protection Agency (EPA) under Contract No. 68-W9-0006 (TES 9) to conduct preliminary assessments (PA) and visual site inspections (VSI) of hazardous waste treatment and storage facilities in Region 5. Resource Applications, Inc. (RAI), TES 9 team member, provided the necessary assistance to complete the PA/VSI activities for National MetalCrafters (MetalCrafters).

As part of the EPA Region 5 Environmental Priorities Initiative, the RCRA and CERCLA programs are working together to identify and address RCRA facilities that have a high priority for corrective action using applicable RCRA and CERCLA authorities. The PA/VSI is the first step in the process of prioritizing facilities for corrective action. Through the PA/VSI process, enough information is obtained to characterize a facility's actual or potential releases to the environment from solid waste management units (SWMU) and areas of concern (AOC).

A SWMU is defined as any discernible unit at a RCRA facility in which solid wastes have been placed and from which hazardous constituents might migrate, regardless of whether the unit was intended to manage solid or hazardous waste.

The SWMU definition includes the following:

- RCRA-regulated units, such as container storage areas, tanks, surface impoundments, waste piles, land treatment units, landfills, incinerators, and underground injection wells
- Closed and abandoned units
- Recycling units, wastewater treatment units, and other units that EPA has generally exempted from standards applicable to hazardous waste management units
- Areas contaminated by routine and systematic releases of wastes or hazardous constituents. Such areas might include a wood preservative drippage area, a loading-unloading area, or an area where solvent used to wash large parts has continually dripped onto soils.

An AOC is defined as any area where a release to the environment of hazardous waste or constituents has occurred or is suspected to have occurred on a nonroutine and nonsystematic basis. This includes any area where such a release in the future is judged to be a strong possibility.

The purpose of the PA is as follows:

- Identify SWMUs and AOCs at the facility.
- Obtain information on the operational history of the facility.
- Obtain information on releases from any units at the facility.
- Identify data gaps and other informational needs to be filled during the VSI.

The PA generally includes review of all relevant documents and files located at state offices and at the EPA Region 5 office in Chicago.

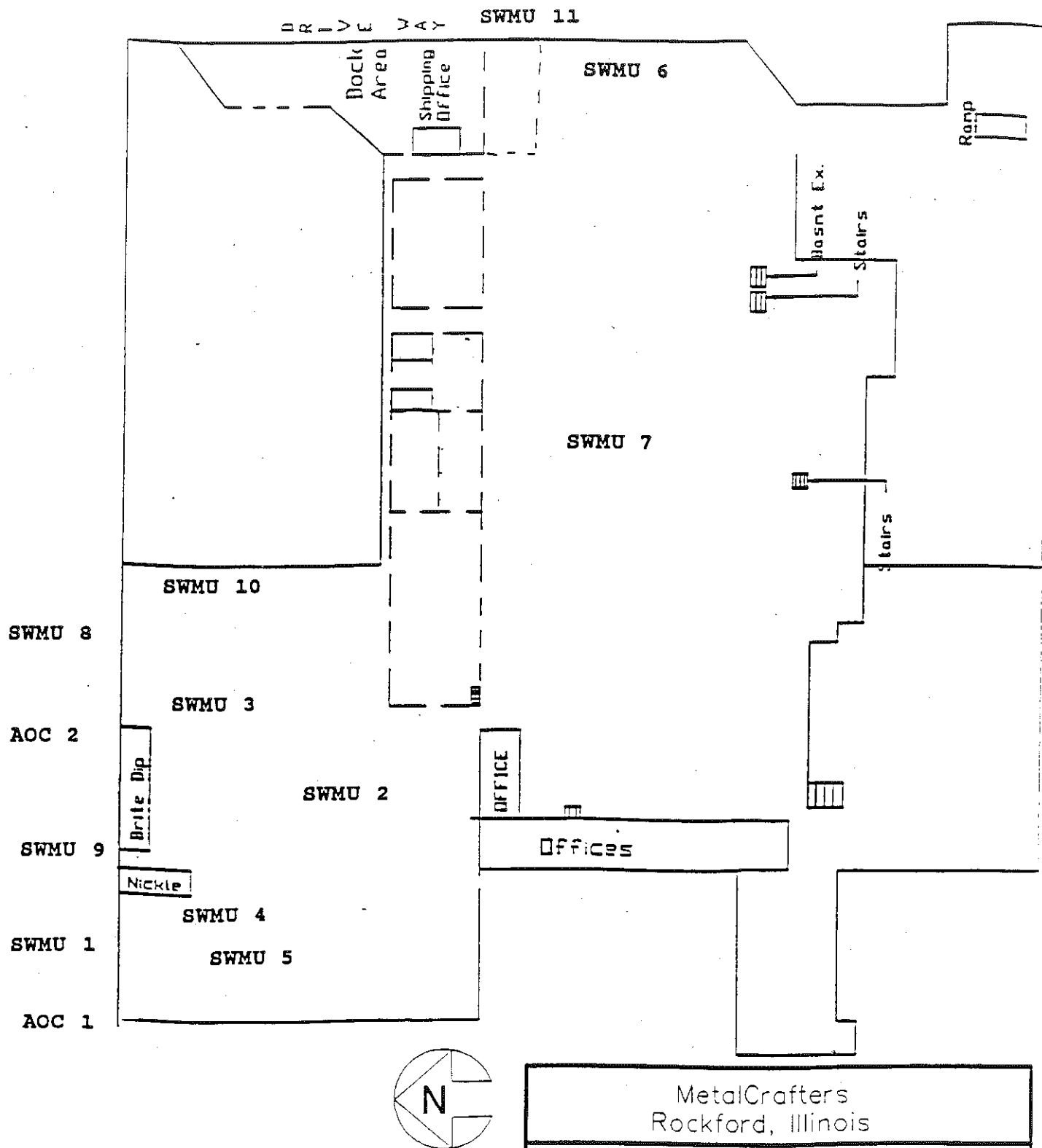
The purpose of the VSI is as follows:

- Identify SWMUs and AOCs not discovered during the PA.
- Identify releases not discovered during the PA.
- Provide a specific description of the environmental setting.
- Provide information on release pathways and the potential for releases to each medium.
- Confirm information obtained during the PA regarding operations, SWMUs, AOCs, and releases.

The VSI includes interviewing appropriate facility staff, inspecting the entire facility to identify all SWMUs and AOCs, photographing all SWMUs, identifying evidence of releases, initially identifying potential sampling locations, and obtaining all information necessary to complete the PA/VSI report.

This report documents the results of a PA/VSI of the National MetalCrafters (MetalCrafters) facility in Rockford, Illinois. The PA was completed on June 11, 1991. RAI gathered and reviewed information from the Illinois Environmental Protection Agency (IEPA) and from EPA Region 5 RCRA files. RAI also reviewed documents from the U.S. Department of Agriculture (USDA), U.S. Geological Survey (USGS), Federal Emergency Management Agency (FEMA) and the Illinois State Geological Survey (ISGS). The VSI was conducted on June 13, 1991. It included interviews with MetalCrafters facility representatives and a walk-through inspection of the facility. Eleven SWMUs and 2 AOCs were identified at the facility.

RAI completed EPA Form 2070-12 using information gathered during the PA/VSI. This form is included in Attachment A. The VSI is summarized and 22 inspection photographs are included in Attachment B. Field notes from the VSI are included in Attachment C.




MetalCrafters Rockford, Illinois
Figure 2 Facility Layout
Scale: 1" = 100' Source: MetalCrafters, 1983
 Resource Applications, Inc.

TABLE 1
SOLID WASTE MANAGEMENT UNITS (SWMU)

SWMU Number	SWMU Name	RCRA Hazardous Waste Management Unit*	Status
1	Hazardous Waste Storage Tank	Yes	Closed as of December 1986
2	Hazardous Waste Storage Area	No	Active, less than 90-day storage
3	Upper Wastewater Treatment Unit	No	Active
4	Lower Wastewater Treatment Unit	No	Inactive as of June 1991
5	Zinc Plating Filter Press	No	Inactive as of June 1991
6	Waste Oil Storage Tank	No	Active
7	Waste Oil Satellite Accumulation Areas	No	Active, less than 90 day storage
8	Dumpster Waste Storage Area	No	Active
9	Barium Waste Storage Area	Yes	Closed as of December 1986
10	Cyanide Storage Area	Yes	Closed as of December 1986
11	Scrap Copper Storage Truck	No	Active

Note:

* A RCRA hazardous waste management unit is one that currently requires or formerly required a RCRA Part A or Part B permit.

processes are treated in a wastewater treatment unit (SWMU 4) and disposed of in the sewer. Waste oils generated during production of fasteners and vehicle maintenance are collected in the Waste Oil Satellite Accumulation Areas (SWMU 7) and transported to the Waste Oil Storage Tank (SWMU 6) before they are picked up for treatment. Spent trichloroethene (TCE) is stored in barrels at the Hazardous Waste Storage Area (SWMU 2) before it is transported off-site for treatment. In 1990, MetalCrafters began nickel plating and copper bright dip operations. The nickel cake generated from the plating operation is stored in the same area as the spent TCE. All other wastes generated from the plating and copper bright dip operations are treated at the Upper Wastewater Treatment Unit (SWMU 3) before disposal in the sanitary sewer. This wastewater treatment unit was designed in 1990 specifically to manage wastes generated from the nickel plating and copper bright dip operations.

2.3 WASTE GENERATING PROCESS

In the nickel plating operation, wastes are generated from the pickling and plating processes (Table 2). The products are placed in a series of cleaning tanks containing sulfuric acid, water rinses, and sodium hydroxide, to remove any scale build-up. The wastes generated from the pickling line are pumped to the Upper Wastewater Treatment Unit (SWMU 3) for treatment before discharge to the sewer system. The plating solution is filtered in a press, generating nickel cake. The cake, generated at a rate of five to eight 55-gallon drums every 90 days, is temporarily stored in SWMU 2 and picked up by PDC Response, Inc., Peoria, Illinois (PDC) for disposal. The wastewater generated from the press is treated and discharged into the sewer system. MetalCrafters operates a copper brightening line that also consists of a series of sulfuric acid, water rinse, and sodium hydroxide cleaning tanks. Waste from this process is pumped to SWMU 3 for treatment before disposal in the sewer system.

Wastes generated in the zinc plating and phosphate operations follow a similar sequence of cleaning and rinsing tanks; however, hydrochloric acid is used in the pickling process associated with zinc plating and phosphoric acid is used in the phosphate process. The spent hydrochloric acid, generated at a rate of 3,000 gallons every 90 days, is pumped into the Hazardous Waste Storage Tank (SWMU 1) for temporary storage before it is picked up by Envirite, Inc., Harvey, Illinois, for disposal. The waste sodium hydroxide cleaners and rinse waters are treated in the Lower Wastewater Treatment Unit (SWMU 4) before disposal in the sewer system. The zinc plating solution is pumped through the Zinc Plating Filter Press (SWMU 5) creating a zinc cake. The waste, generated at a rate of 36 cubic yards per month, is temporarily stored in an adjacent 12-cubic yard, plastic lined, steel dumpster prior to disposal by Browning Ferris Industries, Inc. (BFI), Davis Junction, Illinois.

TABLE 2
SOLID WASTES

<u>Waste/EPA Waste Code</u>	<u>Source</u>	<u>Primary Management Unit</u>
Hydrochloric Acid/K062	Pickling Process	SWMU 1
Spent TCE/F001	Production Process	SWMU 2
Nickel Cake/F006	Plating Process	SWMU 3
Zinc Cake	Plating Process	SWMU 5
Waste Oil	Production Process	SWMUs 6 & 7
Grinding Sludge	Production Process	SWMU 8
Scrap Copper	Production Process	SWMU 11
Wastewaters	Production Process	SWMUs 3 & 4
Creosote Wood Blocks	One Time Generation From Removal Of Flooring	SWMU 8

The phosphate operation involves a hydrochloric and phosphoric pickling process. The hydrochloric acid is pumped into SWMU 1 for storage. The phosphoric acid is separated out of the rinse waters and pumped back into the process and the rinse waters are treated in the Lower Wastewater Treatment Unit (SWMU 4) before disposal in the sewer system.

Trichloroethene (TCE), used as a part degreaser, is generated at a rate of 10 to 12 55-gallon drums every month. The spent TCE is temporarily stored at SWMU 2 before it is picked up by Avganic Industries, Inc., Cottage Grove, Wisconsin for treatment.

Waste oil is generated during the routine maintenance of facility vehicles and production equipment. The oil is stored in numerous Waste Oil Satellite Accumulation Areas (SWMU 7) throughout the facility before transfer to the 3,000-gallon Waste Oil Storage Tank (SWMU 6). The waste oil is generated at a rate of 3,000 gallons every 90 days and is picked up by Avganic Industries for treatment.

Scrap copper is generated during the cutting of copper coated fasteners. The waste, generated at a rate of 12 cubic yards every two months, is stored in the bed of a truck prior to removal by various scrap haulers (SWMU 11).

At the time of the VSI, RAI observed three separate dumpsters; (SWMU 8) one containing a sludge generated from the grinding of products and two containing creosote-coated wood blocks used as flooring in the facility. According to facility representatives, the grinding sludge will continue to be generated, but the creosote blocks were a one-time only waste. MetalCrafters is currently awaiting the results of samples taken to determine if these wastes are hazardous or non-hazardous. BFI has been contracted to remove the grinding sludge and PDC has been contracted to remove the creosote blocks.

2.4 RELEASE HISTORY

On January 31, 1989, a release was observed at the hydrochloric acid product tank (AOC 2). The release, estimated to be 300 gallons, occurred when an employee attempted to replace a bolt on the tank. An acid vapor cloud resulted from the release and the Rockford Fire Department restricted traffic and confined residents to their homes in a 48-block radius. According to the fire department, at no time was the situation life-threatening. FIW, Inc. pre-emptively neutralized the surrounding soil with soda ash. Results from soil samples are included in Attachment D (FIW, 1989).

On April 19, 1989, 250 to 300 gallons of quenching oil was observed on the ground outside the building. Around 1974, three 500-gallon steel oil tanks were removed from the building and placed in the northeastern corner of the property. It could not be determined when the release occurred, but the oil soaked into the ground and no vegetation grew for a period of time in the 130-foot square area where the release was observed. PDC removed the spilled oil and contaminated soil and disposed of it at the Clinton Landfill in Clinton, Illinois (PDC, 1989). During the VSI, RAI observed that vegetation has been re-established in the spill area (see photo 18).

A release of 100 gallons of waste hydrochloric acid occurred on June 7, 1991. While pumping the waste out of the Hazardous Waste Storage Tank (SWMU 1), the spent acid spilled over the side of the tank. A pipe used to drain rain water from the secondary containment surrounding the tank had been left unplugged. When the spill occurred, the spent acid drained onto the surrounding soil. Sodium bicarbonate was spread over the spill area to neutralize the acid (see photos 11 & 12). Soil samples were taken and the results are pending.

While viewing the bulk waste oil storage tank during the VSI, RAI observed a truck load of scrap copper with oil dripping from beneath the Scrap Copper Storage Truck (SWMU 11). The oil had pooled beneath the truck and a drain connected to the sanitary sewer was located 30 feet away. It is not known how long the release had been going on.

2.5 REGULATORY HISTORY

MetalCrafters filed a Notification of Hazardous Waste Activity designating the company as a generator and treatment, storage, and disposal facility (TSD) on August 7, 1980 (MetalCrafters, 1980a). The company's Part A permit application was filed on November 14, 1980 stating that 1,250,000 tons K062 waste were treated and stored there (T04, S02) (MetalCrafters, 1980b). The Part A was resubmitted on May 30, 1985 stating that 210 tons of D002 (S02) are stored annually (MetalCrafters, 1985). MetalCrafters filed for closure of the T04 and S02 (SWMUs 1, 9, and 10) units on April 30, 1986. The units were closed on December 1, 1986 and the Part A was officially withdrawn under RCRA requirements (IEPA, 1987). MetalCrafters is now classified as a generator only.

A June 21, 1985 IEPA inspection revealed several violations of 35 Illinois Administrative Code Parts 722 and 725. MetalCrafters' representatives failed: to provide a waste analysis plan; to post danger signs in appropriate areas; to conduct routine facility inspections to identify potential releases to the environment; to provide personnel training records; to test fire extinguishers; to provide operating

records and a closure plan; to inspect drum and tank storage areas; and, to provide copies of annual reports. After numerous follow-up inspections, all violations were resolved on June 12, 1986 (IEPA, 1986b).

MetalCrafters has an Operating Permit to operate boiler units and plating lines. The permit was issued on January 30, 1990 and expires on January 18, 1995 (IEPA, 1990). The facility also has a NPDES Permit (No. IL0050650) to discharge to the Rock River through a storm sewer. The permit was issued on November 16, 1988 and expires November 1, 1993. The permit states that one outfall will be used to discharge non-contact cooling water free from process or wastewater discharges (IEPA, 1988). IEPA issued permit No. 1986-E0-3653 to MetalCrafters on February 28, 1986 to operate water pollution control equipment, specifically the Lower Wastewater Treatment Unit. The permit expired on February 1, 1991 and MetalCrafters is in the process of renewing it (IEPA, 1986a). On August 27, 1990, the Rock River Water Reclamation District (RRWRD) issued a General Wastewater Discharge Permit to MetalCrafters. The permit expires September 30, 1991 (RRWRD, 1990). There have been no violations of the above permits.

MetalCrafters is not a Superfund site and no CERCLA activity has occurred at the facility.

2.6 ENVIRONMENTAL SETTING

This section describes the climate, flood plain and surface water, geology and soils, and ground water in the vicinity of the National MetalCrafters facility.

2.6.1 Climate

The site is situated in Rockford, Winnebago County, Illinois. A National Weather Service office is located at Rockford. With no significant topographical barriers to the air mass flow, the climate in the area is typically continental with cold winters, warm summers and frequent short period fluctuations in temperature, humidity, cloudiness and wind direction (Ruffner and Bair, 1985). The average daily temperature is 47.8°F. The lowest average daily minimum temperature is 9.8°F in January. The highest average daily maximum temperature is 91.9°F in August. The prevailing wind direction is west-southwest and the average wind speed is 9.9 miles per hour. Average annual net precipitation is 5.44 inches. In winter about one half of the precipitation, or 10 percent of the annual total, falls as snow. During the fall, winter and spring, the pattern of precipitation tends to be more uniform over both time

and distance, whereas in summer rainfall is often locally heavy and variable. The one year, 24-hour maximum rainfall recorded in the area over the last 25 years is 5.56 inches (Ruffner, 1985).

2.6.2 Flood Plain and Surface Water

The general direction of surface flow at the site is toward the Rock River at a distance of about 1/2 mile towards the west. The Rock River flows from north to south. The surrounding topography has a slope of about 40 feet over a distance of 1/2 mile, providing effective relief. The facility is in a Zone C floodplain area, that is, an area of minimal flooding outside the 500-year flood limit.

2.6.3 Geology and Soils

The landscape along the Rock River near the facility is characterized by glacial drift deposits that range up to 300 feet thick (Anderson, 1967). These glacial deposits, often referred to as overburden, unconsolidated material or drift, consist of pebbly clay, sand and gravel (Berg, et al., 1984). The facility is surrounded by buildings, parking lots and pavement which prevent correct identification of the geological features. The drainage characteristics are well graded so that surface water drains to edges of lots and finally into the drainage system. As a result of construction activities the water carrying capacity and permeability of soil varies and is generally considered low to moderate. Runoff is considered moderate to high because of steep ground slope and the vicinity of the Rock River.

Winnebago County is characterized by broad, rolling, glaciated uplands rising 100 to 200 feet above the valleys. Bedrock outcrops are numerous throughout most of the county. In the vicinity of the facility the glacial deposits are underlain by bedrock layers. The topmost are sedimentary rocks, shale, sandstone, and dolomite of the Cambrian, Ordovician and Silurian systems. Precambrian granite forms the basement rocks, which are reached at depths of about 2,650 feet and to 3,845 feet. Above the Precambrian granite are about 2,000 feet of sedimentary rocks which represent marine sediments deposited about 520 to 400 million years ago during the Cambrian, Ordovician and Silurian periods of the Paleozoic Era. It consists of sandstones, dolomite and shales. Glacial deposits and underlying bedrock around the site provide abundant groundwater, and mineral resources such as sand, gravel and dolomite (Berg, et al., 1984).

Along the Rock River near the site, bedrock is covered by variable thicknesses of unconsolidated surficial deposits including geological till and alluvium (Anderson, 1967). The uppermost

constituents of the bedrock units are dolomite of the Galena and Platteville groups which are generally a dependable source of groundwater. The group has a combined maximum thickness of more than 380 feet in the site vicinity (Berg et al., 1984).

2.6.4 Ground Water

In northern Illinois, groundwater resources are available from four major aquifers: (1) sand and gravel aquifers in the glacial drift; (2) the shallow dolomite aquifers, consisting of the Galena and Platteville dolomite groups; (3) sandstone aquifers consisting of the Glenwood-St. Peter and Ironton-Galesville sandstones, and; (4) the deeper Mt. Simon aquifers, consisting of the Mt. Simon sandstones of the Eau Claire formation (Berg et al., 1984). In the site vicinity, excellent sand and gravel aquifers occur. Over 350 feet of clean coarse sand and gravel provide municipal and industrial water supplies (Hackett and Bergstrom, 1956).

The Galena-Platteville dolomite is probably the most widely used bedrock aquifer for domestic supplies but the deeper sandstones are the most dependable sources for large quantities of groundwater. This group constitutes the uppermost bedrock in Winnebago county including the facility locale. Because of their widespread distribution, consistent water yielding zones and shallow position, these rocks provide water through joints and fractures close to the land surface. The average thickness of drift cover over the dolomite is 33 feet and average depth of wells is 104 feet. Reported well yields range from 5 to 40 gallons per minute (gpm) with an average yield of 20 gpm. About 20 feet to 100 feet penetration into dolomite yields satisfactory water supplies. Where the drift cover is relatively thin, dolomite aquifers are very sensitive to contamination because water moves through the joints and fractures and there is little opportunity for filtration as through granular materials (Berg, et al., 1984).

The St. Peter sandstones, the Ironton-Galesville sandstones and the Elmhurst-Mt. Simon sandstones furnish large quantities of water. Deeper aquifers are used only for larger municipal and industrial water supplies. However, use of these sources is limited because of high construction and maintenance costs. The St. Peter sandstone, the shallowest aquifer in the area, is used for domestic groundwater supplies and is present within 300 ft. of the land surface (Berg et al., 1984).

2.7 RECEPTORS

MetalCrafters is located in an industrial area of Rockford, Illinois (population 139,000). The Greater Rockford Airport borders the facility to the south and residential areas are located 1/4 mile to

the southeast. The facility is surrounded by a chain link fence and has a motion-detecting security system.

The general topography is sloped toward the Rock River, located 1/2 mile west of the facility. The facility and the community receive their water supply from ground water wells located at a depth of 100 feet and extending to a depth of 300 feet. The closest well to the facility is located 2.2 miles to the southwest. Other than the Kishwaukee River located 2 miles south of the facility and the Rock River, there are no sensitive environments within two miles of the facility.

3.0 SOLID WASTE MANAGEMENT UNITS

This section describes the 11 SWMUs identified during the PA/VSI. The following information is presented for each SWMU: description of the unit, dates of operation, wastes managed, release controls, history of release, and RAI observations.

SWMU 1

Hazardous Waste Storage Tank

Unit Description: This unit consists of a 3,000-gallon fiberglass tank surrounded by a 4-foot high concrete berm (S02). It is located outdoors, northwest of the building.

Date of Startup: 1958

Date of Closure: This tank was used to store wastes for more than 90 days. The unit was RCRA closed as a storage tank in 1986. From 1986 to 1991 the unit was used to store wastes for less than 90 days. As of June 28, 1991, the unit will no longer be used to store waste.

Wastes Managed: This unit managed spent hydrochloric acid (K062).

Release Controls: A 4-foot high concrete berm surrounds the unit. A drainage pipe extends from the base of the berm to allow drainage of excess rain water.

History of Release: On June 7, 1991, while spent acid was being removed for disposal, the waste began to overflow from the tank and enter the secondary containment. The drainage pipe was not plugged and approximately 100 gallons of the waste entered the soil. Soil sample results are pending.

Observations: The tank and berm appear sound. Sodium bicarbonate was scattered over the area of the spill (see photos 11 & 12).

SWMU 2**Hazardous Waste Storage Area**

Unit Description: This unit is an open area located indoors and contains 55-gallon drums of raw product and waste material. The wastes are stored less than 90 days. It is located in the northwest corner of the facility adjacent to the nickel plating line.

Date of Startup: 1990

Date of Closure: This unit is currently active.

Wastes Managed: This unit manages nickel cake (F006) and spent TCE (F001).

Release Controls: There is no secondary containment surrounding the drums. The flooring consists of creosote-coated wooden blocks placed directly above concrete flooring. The drums rest on wooden pallets.

History of Release: No releases have been documented.

Observations: All the drums appear sound and no evidence of a release was observed. At the time of the VSI, RAI observed 3 drums of spent TCE and 8 drums of nickel cake (see photo 1).

SWMU 3**Upper Wastewater Treatment Unit**

Unit Description: This unit is located east of the bright dip line and consists of a 1,000-gallon holding tank, a 5,000-gallon holding tank, a 3,000-gallon clarifier, a 2,000-gallon pH adjustment tank, a 300-gallon pH adjustment tank, a 600-gallon neutralization tank, a 600-gallon flocculation tank, and a filter press.

Date of Startup: 1990

Date of Closure: This unit is currently active.

Wastes Managed: This unit manages wastewater from the pickling, nickel plating, and copper bright dip operations.

Release Controls: A one-foot high concrete berm surrounds this unit.

History of Release: No releases have been documented.

Observations: The unit appeared sound and no evidence of a release was observed (see photos 2 & 3).

SWMU 4

Lower Wastewater Treatment Unit

Unit Description: This unit, located in the basement below the phosphate and zinc plating operations, treats wastewater generated from these two processes. Wastes from the phosphate line flow through a system consisting of three 4,000-gallon phosphate rinse water tanks where the phosphoric acid is separated out into a 10,000-gallon holding tank. The phosphoric acid is then pumped back to the phosphate line for re-use. The Lower Wastewater Treatment Unit treats the rinse water after the phosphoric acid is removed and discharges the effluent to the sewer system. The Unit consists of a 7,900-gallon equalization tank, a 1,000-gallon neutralization tank, a 5,500-gallon clarifier, and a 560-gallon flocculation tank. Zinc plating wastes are pumped to and treated in the Unit. The wastes are then pumped to the Zinc Plating Filter Press. The wastewater generated from the press is then pumped back into the Unit, treated, and discharged into the sewer system.

Date of Startup: 1958

Date of Closure: This unit ceased operations on June 28, 1991.

Wastes Managed: This unit manages wastewater from the zinc plating and phosphate operations.

Release Controls: The phosphate rinse water holding tanks and the phosphoric acid holding tank are constructed of steel and are situated directly above a

crack-free 8-inch thick concrete floor. There is no berm enclosing these tanks. The clarifying unit is surrounded by a 10-inch thick, 6-foot high concrete berm. The flocculation tank is constructed of fiberglass and is also situated above the 8-inch thick concrete flooring. The equalization and neutralization tanks are placed directly in the ground. The integrity of these last two tanks could not be determined. The contents of these two tanks were measured routinely to determine if a release had occurred.

History of Release: No releases have been documented.

Observations: All of the visible tanks associated with this unit appeared sound and no evidence of a release was observed (see photos 13-17).

SWMU 5 Zinc Plating Filter Press

Unit Description: This unit, located in the northwestern portion of the facility, consists of a filter press and a 12-cubic yard plastic lined dumpster used to hold the zinc cake generated from the filter. After treatment in the Lower Wastewater Treatment Unit, the plating wastes are pumped to the filter press generating a cake. The cake is scraped off the filter and placed in the dumpster before disposal.

Date of Startup: 1958

Date of Closure: This unit ceased operations on June 28, 1991.

Wastes Managed: Zinc plating solution and non-hazardous zinc cake.

Release Controls: The dumpster is lined with polypropylene plastic. A tank is used to collect rinse water that drips from the filter press. The rinse water is then pumped into SWMU 4.

History of Release: No releases have been documented.

Observations: The unit appears sound and no evidence of release was observed (see photos 6 & 7).

SWMU 6 Waste Oil Storage Tank

Unit Description: This unit, located in the eastern portion of the building, consists of a 3,000-gallon steel tank used to hold waste oil prior to disposal.

Date of Startup: 1958

Date of Closure: This unit is currently active.

Wastes Managed: This unit manages waste oil.

Release Controls: The unit is situated on eight inches of concrete. No other release controls were observed.

History of Release: No releases have been documented.

Observations: The unit appears sound and no evidence of a release was observed (see photo 19).

SWMU 7 Waste Oil Satellite Accumulation Areas

Unit Description: These units consist of numerous pans and buckets located throughout the facility. These containers are used to temporarily store waste oil before it is transferred to SWMU 6.

Date of Startup: 1958

Date of Closure: These units are currently active.

Wastes Managed: These units manage waste oil.

Release Controls: The containers rest directly on 8-inch thick concrete flooring.

History of Release: At the time of the VSI, small amounts of oil were observed on the floor surrounding some of the containers.

Observations: The majority of the containers did not show evidence of release but some oil was observed on the concrete floor (see photo 20).

SWMU 8 Dumpster Waste Storage Area

Unit Description: This unit, located outside and north of the building, consists of 3 dumpsters, each with a capacity of 12 cubic yards. Two contain creosote-coated wooden flooring and the other contains a grinding sludge generated from the threading process.

Date of Startup: 1991

Date of Closure: This unit is currently active.

Wastes Managed: Samples recently were taken to determine the exact makeup of wastes and the results are pending.

Release Controls: The dumpsters are situated directly above a concrete-covered parking area.

History of Release: No releases have been documented.

Observations: All 3 dumpsters appear sound and no evidence of release was observed (see photos 9 & 10).

SWMU 9 Barium Waste Storage Area

Unit Description: This 30 foot by 8 foot area is located outside just north of the building. It was used to store drums of barium chloride (D005) generated from an experimental heat treating process (S01).

Date of Startup: Unknown.

Date of Closure: December 1, 1986

Wastes Managed: This unit managed barium chloride (D005).

Release Controls: The drums had been removed at the time of the VSI, so it could not be determined if they were sound or enclosed in secondary containment.

History of Release: Sampling of the soil surrounding the area revealed barium contamination below EPA standards. Sampling results are included in Attachment E (MetalCrafters, 1986). No further evidence of release was observed.

Observations: The drums had been removed at the time of the VSI and no evidence of release was observed (see photo 21).

SWMU 10 Cyanide Storage Area

Unit Description: This 23 foot by 4 foot area is located inside the facility in the north central portion of the building. It was used to store drums of cyanide plating solution (F008) generated from a cyanide plating operation (S01).

Date of Startup: Unknown.

Date of Closure: December 1, 1986

Wastes Managed: This unit managed cyanide wastes (F008).

Release Controls: The drums were indoors on eight-inch thick concrete flooring. It is unknown whether the drums were surrounded by secondary containment.

History of Release: The area was sampled for cyanide but none was detected (Attachment E). No other evidence of release has been documented.

Observations: The drums had been removed and no evidence of release was observed (see photo 20).

SWMU 11 Scrap Copper Storage Truck

Unit Description: This unit is a truck bed used to store scrap copper generated from cutting copper coated fasteners. The truck is located just north of SWMU 6. Oil is used as a lubricant during the cutting process and continues to adhere to the scrap copper.

Date of Startup: 1990

Date of Closure: This unit is currently active.

Wastes Managed: Scrap copper which has been lubricated with oil is managed in this unit.

Release Controls: The bed of the truck is constructed of steel; however, the floor of the bed may have been breached since it is old and waste oil was observed leaking on the concrete.

History of Release: A release of waste oil was occurring at the time of the VSI.

Observations: During the VSI, RAI noticed that lubricating oil used in the threading process was dripping from the truck bed. A sewer drain was located approximately 30 feet to the northeast. There was no container beneath the truck to catch the dripping oil (see photo 22).

4.0 AREAS OF CONCERN

RAI identified two AOCs during the PA/VSI which are discussed below.

AOC 1 Underground Storage Tank (UST)

This unit, containing 5,000 to 7,000 gallons of methanol, is located on the northwestern portion of the property near SWMU 1. According to facility personnel, the integrity of the tank is unknown. The UST is an AOC because it has been in the ground since 1958 and is likely to have been the source of a release at some time in its history.

AOC 2 Hydrochloric Acid Tank

This unit, containing 10,000 gallons of virgin hydrochloric acid, is located outside, north of the building, just west of SWMU 8. This unit is an AOC due to a January, 1989 acid release. The soil was sampled and revealed uncharacteristically high pH levels. It is likely that the high pH resulted from the addition of soda ash to the soil.

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5.0 CONCLUSIONS AND RECOMMENDATIONS

The PA/VSI identified 11 SWMUs and 2 AOCs at the MetalCrafters facility. Background information on the facility's location, operations, waste generating processes, release history, regulatory history, environmental setting, and receptors is presented in Section 2.0. SWMU-specific information, such as the unit's description, dates of operation, wastes managed, release controls, release history, and observed condition, is discussed in Section 3.0. AOCs are discussed in Section 4.0. Following are RAI's conclusions and recommendations for each SWMU and AOC. Table 3 identifies the SWMUs and AOCs at the MetalCrafters facility and suggested further actions.

SWMU 1

Hazardous Waste Storage Tank

Conclusions:

The tank has not operated since June 28, 1991. The threat of release via various pathways is summarized below.

Ground water: Moderate. Since a release to the soil already occurred, there is a potential that it could have reached the ground water.

Surface water: Low. A release would be contained before it could reach the nearest surface water one-half mile to the west of the facility.

Air: Low. The wastes are enclosed in a storage tank.

On-site soils: A release to the soil north of the unit occurred due to an inefficient secondary containment system. Soil sampling results are pending.

Recommendations:

If soil sampling results reveal contamination, then the soil should be remediated.

SWMU 2

Hazardous Waste Storage Area

Conclusions:

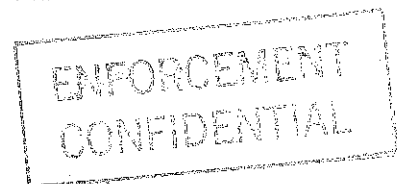
The waste drums appear sound and are situated above solid flooring. Facility personnel could contain a release before it had the opportunity to reach the environment. Therefore, the potential for release to ground water, surface water, air or soil is low.

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TABLE 3
SWMU AND AOC SUMMARY

<u>SWMU</u>	<u>Operational Dates</u>	<u>Evidence Of Release</u>	<u>Suggested Further Action</u>
1. Hazardous Waste Storage Tank	1958 to 1991	Spent hydrochloric acid release occurred on June 7, 1991.	Results from soil samples are pending.
2. Hazardous Waste Storage Area	1990 to present	None	No further action at this time.
3. Upper Wastewater Treatment Unit	1990 to present	None	No further action at this time.
4. Lower Wastewater Treatment Unit	1958 to 1991	None	No further action at this time.
5. Zinc Plating Filter Press	1958 to 1991	None	No further action at this time.
6. Waste Oil Storage Tank	1958 to present	None	No further action at this time.
7. Waste Oil Satellite Accumulation Areas	1958 to present	Oil was observed around some containers.	Monitor containers to prevent spills.
8. Dumpster Waste Storage Area	1991 to present	None	No further action at this time.
9. Barium Storage Area	Unknown to 1986	Soil samples revealed barium contamination.	No further action at this time.
10. Cyanide Storage Area	Unknown to 1986	None	No further action at this time.
11. Scrap Copper Storage Truck	1990 to present	Oil was observed dripping from the truck.	Store waste in a leak proof container.
<u>AOC</u>			
1. Underground Storage Tank	1958 to present	None	Leak test the tank and sample the soil for methanol release.
2. Hydrochloric Acid Tank	1958 to present	Hydrochloric acid release occurred on January 31, 1989.	Sample soil for acidic contamination.

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Recommendations: No further action is recommended at this time.

SWMU 3 Upper Wastewater Treatment Unit

Conclusions: All of the tanks associated with this unit are sound and the one-foot high concrete berm surrounding this unit would contain a release. Therefore, due to the sound containment systems, the potential for release to ground water, surface water, air or soil is low.

Recommendations: No further action is recommended at this time.

SWMU 4 Lower Wastewater Treatment Unit

Conclusions: All but two of the tanks associated with this unit pose a low potential for release of hazardous constituents to the ground water, surface water, soil or air. The equalization and neutralization tanks are situated in the ground and the integrity of the lining cannot be determined. The potential for a releases from these two tanks to surface water and air is low, while it is moderate for soil and ground water. A release from these two tanks could enter the soil and ground water if not contained. While this unit was in operation, the contents of these two tanks were measured routinely to determine if a release had occurred.

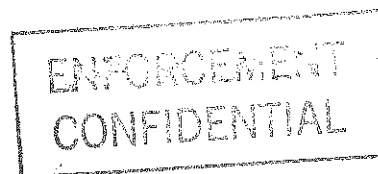
Recommendations: Since this unit is no longer in operation, no further action is recommended at this time.

SWMU 5 Zinc Plating Filter Press

Conclusions: This unit is no longer operating. Due to the inert nature of the wastes formerly stored in the dumpster, the potential for release to ground water, surface water, air or soil is low.

Recommendations: No further action is recommended at this time.

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SWMU 6**Waste Oil Storage Tank**

Conclusions: The tank appears sound but has no secondary containment. The nature of the waste and the sound concrete flooring beneath the tank keep the potential for release to the ground water, surface water, air or soil low.

Recommendations: No further action is recommended at this time.

SWMU 7**Waste Oil Satellite Accumulation Areas**

Conclusions: Due to the sound concrete flooring beneath the containers, the potential for release from these units to ground water, surface water, air or soil is low.

Recommendations: The containers should be monitored to prevent waste oil spills.

SWMU 8**Dumpster Waste Storage Area**

Conclusions: Sampling was conducted to determine if the wastes contained in this unit are hazardous but the results are pending. The solid and inert nature of the wastes contained here makes the potential for release of any hazardous constituents to ground water, surface water, air or soil low.

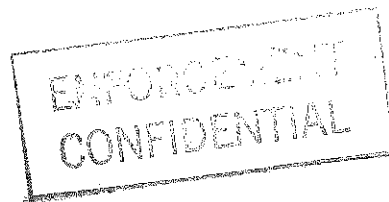
Recommendations: No further action is recommended at this time.

SWMU 9**Barium Storage Area**

Conclusions: This unit was RCRA closed in December 1986. The condition and integrity of the drums once contained here could not be determined. Therefore, the past potential for release to ground water, surface water, air or soil is unknown, but a release did occur. The top four to six inches (2.25 cubic yards) of soil was removed from this unit in June, 1986. Subsequent soil samples taken in October, 1986 (Attachment E) revealed levels of contamination below the EPA's Maximum Contaminant Level of one part per million.

Recommendations: No further action is recommended at this time.

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SWMU 10**Cyanide Storage Area**

Conclusions: This unit was formally closed in December 1986. The condition and integrity of the drums once contained here could not be determined. However, the unit was located indoors, so the potential for release to ground water, surface water, air or soil was low. Results from sampling conducted after closure show no contamination and are included in Attachment E.

Recommendations: No further action is recommended at this time.

SWMU 11**Scrap Copper Storage Truck**

Conclusions: The floor of this unit may have been breached; lubricant oil was observed dripping from it onto the ground. The concrete flooring beneath the truck is sound and any release could be contained before it had the opportunity to reach ground water, surface water, air or soil, so the potential for release to these environmental media is low. However, lubricating oil could enter the sewer system through the storm drain located 30 feet to the northeast.

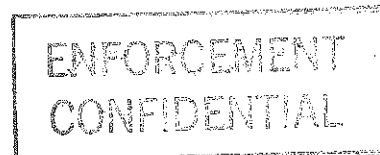
Recommendations: The truck bed should be replaced with a container more suited to holding liquids. In the interim, a container should be placed beneath the truck to collect the dripping oil.

AOC 1**Underground Storage Tank**

Conclusions: It has not been determined if a release to the soil or ground water has occurred. However, due to the length of time the tank has been in the ground, the potential for release to soil or ground water is high. The release potential to air or surface water is low.

Recommendations: A leak test should be performed to determine the integrity of the tank. If a leak is detected, then the surrounding soil should be sampled for methanol release.

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AOC 2

Hydrochloric Acid Tank

Conclusions:

Through documentation made available to RAI, it could not be determined if the contaminated soil was removed and properly disposed. Soil samples were taken from the top soil beneath the tank and revealed high pH levels. This was likely due to the application of soda ash upon discovery of the release. It could not be determined if soil samples were taken below the top soil.

Recommendations:

The soil should be re-sampled for pH analysis. If the results reveal that the soils are of very high or very low pH, then the soil should be remediated.

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DATE 3/18/99
BIN #
INITIALS mv

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ATTACHMENT A

EPA PRELIMINARY ASSESSMENT FORM 2070-12



POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION

01 STATE IL 02 SITE NUMBER ILD 047 032 750

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site) National MetalCrafters		02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER 4500 Kishwaukee Street			
03 CITY Rockford	04 STATE IL	05 ZIP CODE 61125	06 COUNTY Winnebago	07 COUNTY CODE	08 CONG DIST
09 COORDINATES: LATITUDE 42 12 30.N		LONGITUDE 089 05 00.W			
10 DIRECTIONS TO SITE (Starting from nearest public road) The facility is located on the east side of Kishwaukee St., north of The Greater Rockford Airport.					

III. RESPONSIBLE PARTIES

01 OWNER (If known) Galt Industries, Inc.		02 STREET (Business, mailing, residential) 730 5th Avenue			
03 CITY New York	04 STATE NY	05 ZIP CODE 10019	06 TELEPHONE NUMBER (212) 333-8797		
07 OPERATOR (If known and different from owner) MetalCrafters		08 STREET (Business, mailing, residential) 4500 Kishwaukee Street			
09 CITY Rockford	10 STATE IL	11 ZIP CODE 61125	12 TELEPHONE NUMBER (815) 226-1000		
13 TYPE OF OWNERSHIP (Check one) <input checked="" type="checkbox"/> A. PRIVATE <input type="checkbox"/> B. FEDERAL: _____ (Agency name) <input type="checkbox"/> C. STATE <input type="checkbox"/> D. COUNTY <input type="checkbox"/> E. MUNICIPAL <input type="checkbox"/> F. OTHER _____ (Specify) <input type="checkbox"/> G. UNKNOWN					
14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply) <input checked="" type="checkbox"/> A. RCRA 3010 DATE RECEIVED: 08 / 07 / 80 <input type="checkbox"/> B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: ____ / ____ / ____ <input type="checkbox"/> C. NONE MONTH DAY YEAR MONTH DAY YEAR					

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION <input checked="" type="checkbox"/> YES DATE 06 / 13 / 91 <input type="checkbox"/> NO		BY (Check all that apply) <input type="checkbox"/> A. EPA <input checked="" type="checkbox"/> B. EPA CONTRACTOR <input type="checkbox"/> C. STATE <input type="checkbox"/> D. OTHER CONTRACTOR <input type="checkbox"/> E. LOCAL HEALTH OFFICIAL <input type="checkbox"/> F. OTHER: _____ (Specify) CONTRACTOR NAME(S): Resource Applications, Inc.			
02 SITE STATUS (Check one) <input checked="" type="checkbox"/> A. ACTIVE <input type="checkbox"/> B. INACTIVE <input type="checkbox"/> C. UNKNOWN		03 YEARS OF OPERATION 1958 Present BEGINNING YEAR ENDING YEAR <input type="checkbox"/> UNKNOWN			
04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED Sulfuric acid, sodium hydroxide, trichloroethene, and nickel.					
05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION The facility is located in an industrial/residential area. The soil north of the Hazardous Waste Storage Tank has been sampled for possible acidic contamination. The results are still pending.					

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents.)
☐ A. HIGH (Inspection required promptly) ☐ B. MEDIUM (Inspection required) ☒ C. LOW (Inspect on time-available basis) ☐ D. NONE (No further action needed; complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT Kevin Pierard	02 OF (Agency/Organization) U.S. EPA		03 TELEPHONE NUMBER (312) 886-4448		
04 PERSON RESPONSIBLE FOR ASSESSMENT Michael W. Gorman	05 AGENCY	06 ORGANIZATION Resource Applications, Inc.	07 TELEPHONE NUMBER (312) 332-2230	08 DATE 08 / 06 / 91 MONTH DAY YEAR	



POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND
INCIDENTS

I. IDENTIFICATION

01 STATE IL	02 SITE NUMBER ILD 047 032 750
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II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☐ A. GROUNDWATER CONTAMINATION

02 ☐ OBSERVED (DATE: _____)

☒ POTENTIAL

☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: _____

04 NARRATIVE DESCRIPTION

Integrity of underground storage tank is unknown. The tank has been in the ground since 1958. Potential release is likely. Spent hydrochloric acid was released to the soil on June 7, 1991. If results from soil sampling reveal contamination, then the ground also should be sampled.

01 ☐ B. SURFACE WATER CONTAMINATION

02 ☐ OBSERVED (DATE: _____)

☒ POTENTIAL

☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: _____

04 NARRATIVE DESCRIPTION

Low potential for release to surface water. The closest body of water is 0.5 mile west of the facility.

01 ☐ C. CONTAMINATION OF AIR

02 ☐ OBSERVED (DATE: _____)

☒ POTENTIAL

☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: _____

04 NARRATIVE DESCRIPTION

Low potential for release to air. Volatile wastes are located inside a building.

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: _____

04 NARRATIVE DESCRIPTION

None identified.

01 ☐ E. DIRECT CONTACT

02 ☐ OBSERVED (DATE: _____)

☒ POTENTIAL

☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: _____

04 NARRATIVE DESCRIPTION

Low potential for direct contact. The facility is surrounded by a chain link fence.

01 ☐ F. CONTAMINATION OF SOIL

02 ☒ OBSERVED (DATE: 06/07/91)

☐ POTENTIAL

☐ ALLEGED

03 AREA POTENTIALLY AFFECTED: _____

(Acres)

04 NARRATIVE DESCRIPTION

A release of spent hydrochloric acid occurred on June 7, 1991. Results from soil sampling are pending.

01 ☐ G. DRINKING WATER CONTAMINATION

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: _____

04 NARRATIVE DESCRIPTION

None identified.

01 ☐ H. WORKER EXPOSURE/INJURY

02 ☐ OBSERVED (DATE: _____)

☒ POTENTIAL

☐ ALLEGED

03 WORKERS POTENTIALLY AFFECTED: _____

04 NARRATIVE DESCRIPTION

There is potential for employees to accidentally come in contact with acids/alkaline solutions and plating solutions.

01 ☐ I. POPULATION EXPOSURE/INJURY

02 ☐ OBSERVED (DATE: _____)

☒ POTENTIAL

☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: _____

04 NARRATIVE DESCRIPTION

Low potential for direct contact. The facility is surrounded by a chain link fence.



POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND
INCIDENTS

I. IDENTIFICATION

01 STATE IL	02 SITE NUMBER ILD 047 032 750
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II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA 02 ☐ OBSERVED (DATE: 04/19/89) ☐ POTENTIAL ☐ ALLEGED

04 NARRATIVE DESCRIPTION

A release of 250-300 gallons of quenching oil destroyed 130-square feet of vegetation. At the time of the VSI, vegetation had been reestablished.

01 ☐ K. DAMAGE TO FAUNA 02 ☐ OBSERVED (DATE:) ☐ POTENTIAL ☐ ALLEGED

04 NARRATIVE DESCRIPTION (Include name(s) of species)

None identified.

01 ☐ L. CONTAMINATION OF FOOD CHAIN 02 ☐ OBSERVED (DATE:) ☐ POTENTIAL ☐ ALLEGED

04 NARRATIVE DESCRIPTION

None identified.

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES 02 ☐ OBSERVED (DATE:) ☐ POTENTIAL ☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED:

04 NARRATIVE DESCRIPTION

None identified.

01 ☐ N. DAMAGE TO OFF-SITE PROPERTY 02 ☐ OBSERVED (DATE:) ☐ POTENTIAL ☐ ALLEGED

04 NARRATIVE DESCRIPTION

None identified.

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPS ☐ OBSERVED (DATE:) ☐ POTENTIAL ☐ ALLEGED

04 NARRATIVE DESCRIPTION

Waste oil was observed dripping from a Scrap Copper Storage Truck. A sanitary sewer drain was located approximately 30 feet away.

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING 02 ☐ OBSERVED (DATE:) ☐ POTENTIAL ☐ ALLEGED

04 NARRATIVE DESCRIPTION

None identified.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

None identified.

III. TOTAL POPULATION POTENTIALLY AFFECTED:

IV. COMMENTS

Low potential for release from facility SWMUs.

V. SOURCES OF INFORMATION (Cite specific references; e.g., state files, sample analysis, reports)

ATTACHMENT B
VISUAL SITE INSPECTION SUMMARY AND PHOTOGRAPHS

ATTACHMENT B

VISUAL SITE INSPECTION SUMMARY AND PHOTOGRAPHS

VISUAL SITE INSPECTION SUMMARY

MetalCrafters
Rockford, IL
ILD 047 032 750

Date: June 13, 1991

Facility Representatives: Joe Zuzul, MetalCrafters

Inspection Team: Michael Gorman, Resource Applications, Inc.
G. P. Singh, Resource Applications, Inc.

Photographer: Michael Gorman

Weather Conditions: Sunny, Hot, Temperature 90°F

Summary of Activities: RAI conducted a VSI at the MetalCrafters facility on June 13, 1991. Joe Zuzul, explained the facility's operating procedures and then conducted a tour of the facility to demonstrate the operations. During the VSI, RAI observed oil dripping from the bed of a truck used to store scrap copper. A storm drain is located 30 feet from the oil. RAI also observed sodium bicarbonate on the ground north of SWMU 1. The sodium bicarbonate was used to neutralize a June 7, 1991 spent hydrochloric acid release. The VSI was concluded at 3:00 PM.



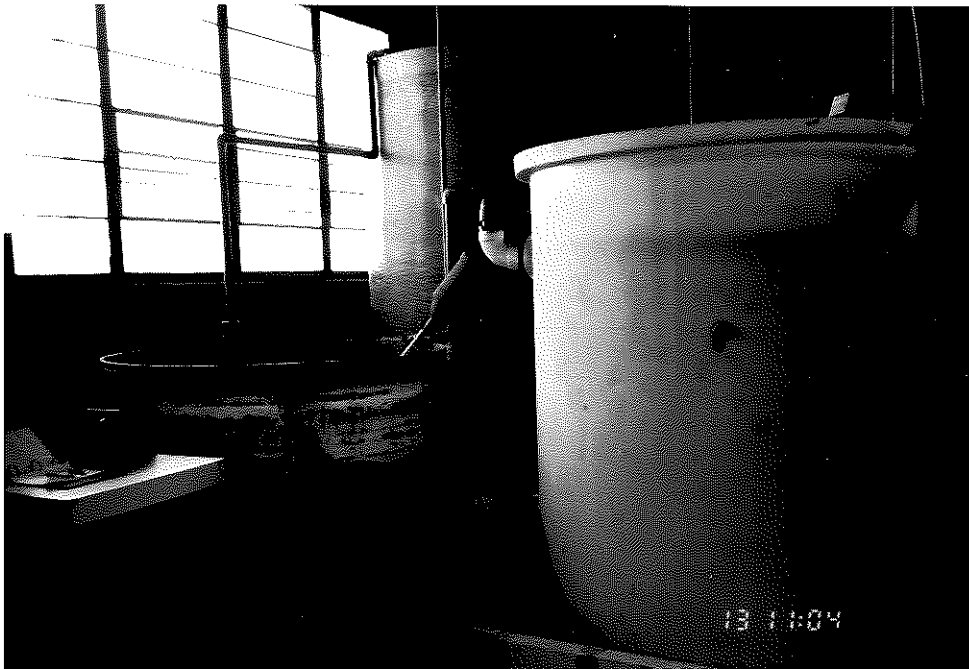
Photograph No.: 1

Location: SWMU 2

Orientation: South

Date: 06/13/91

Description: Hazardous Waste Storage Area. This area contains product TCE, spent TCE, and waste nickel cake.



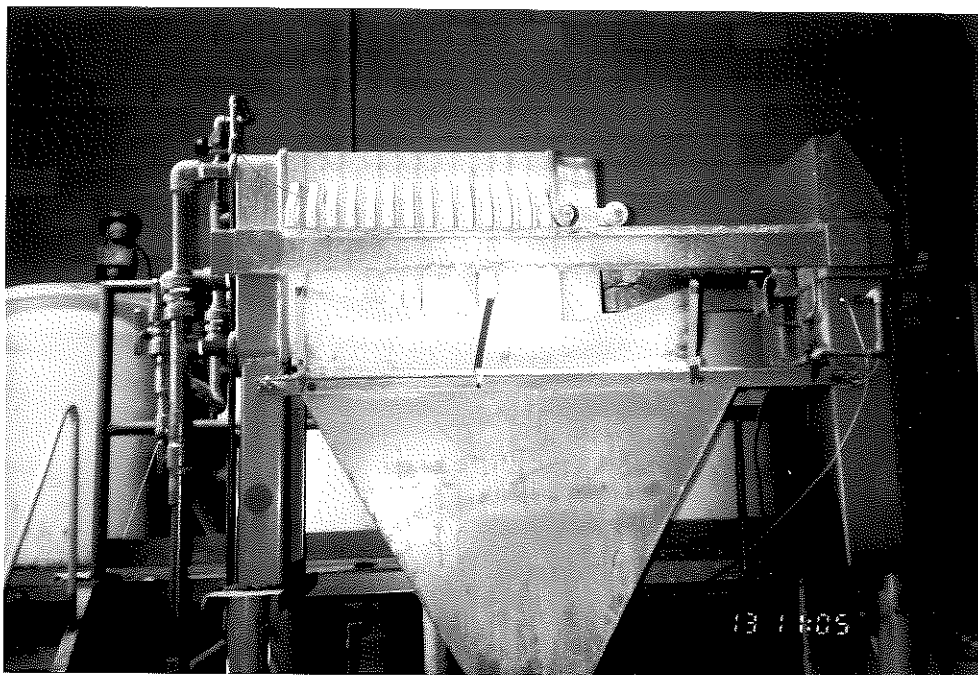
Photograph No.: 2

Location: SWMU 3

Orientation: East

Date: 06/13/91

Description: Upper Wastewater Treatment Unit. The tank in the left foreground is the waste sulfuric acid holding tank.



Photograph No.: 3

Orientation: East

Description: Nickel Filter Press, the neutralization tanks are located behind it.

Location: SWMU 3

Date: 06/13/91



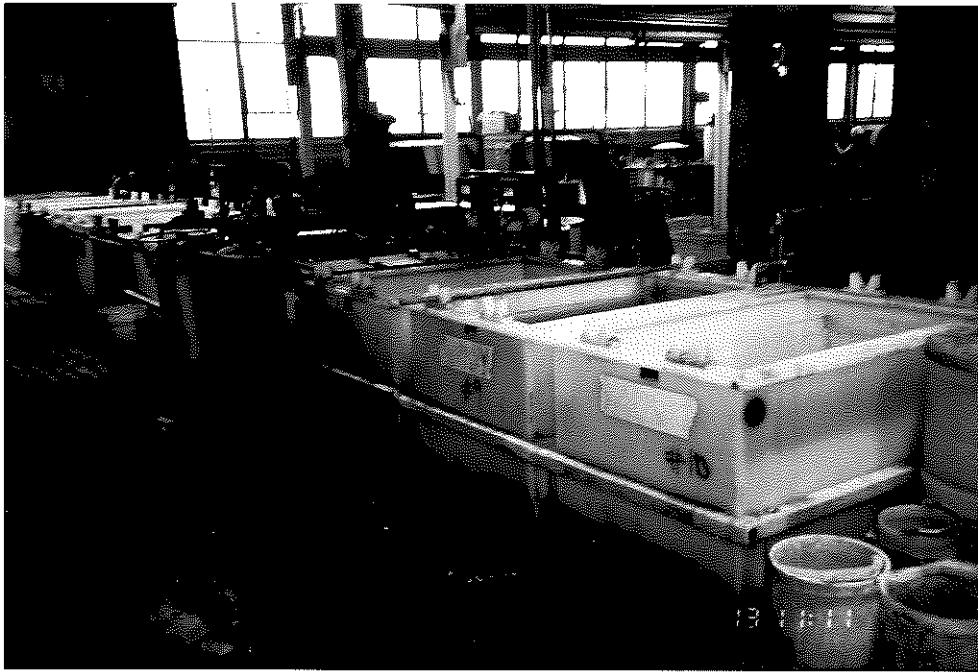
Photograph No.: 4

Orientation: Northwest

Description: Copper bright dip line.

Location: Near SWMU 3

Date: 06/13/91



Photograph No.: 5

Location: Near SWMU 3

Orientation: Northeast

Date: 06/13/91

Description: Nickel plating line. The copper bright dip line is perpendicular to this unit.



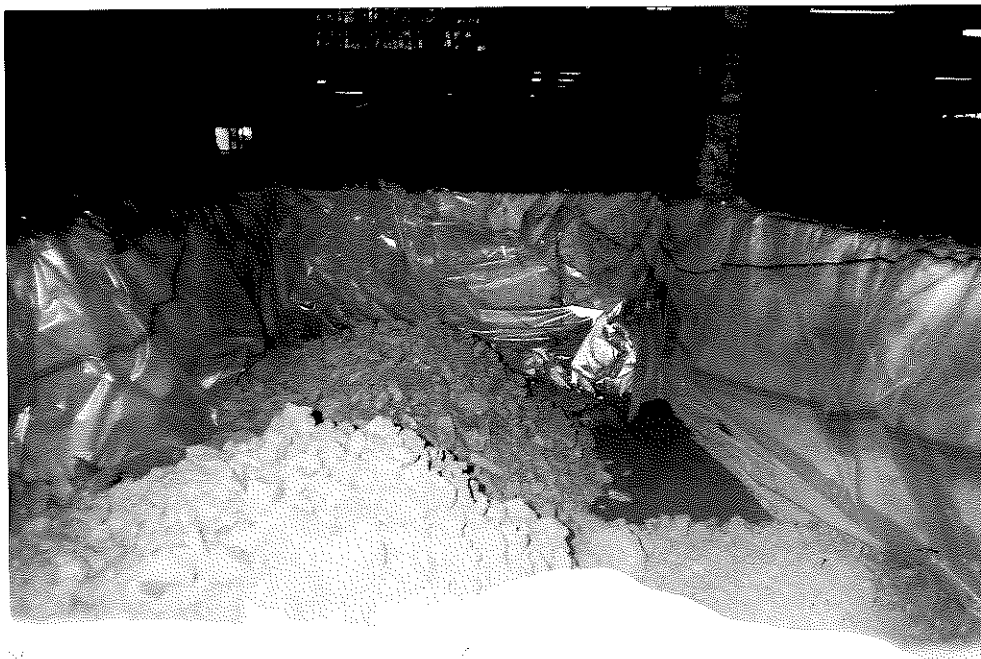
Photograph No.: 6

Location: SWMU 5

Orientation: West

Date: 06/13/91

Description: Zinc Plating Filter Press.



Photograph No.: 7

Orientation: South

Description: Zinc cake generated by filtering the zinc plating rinse.

Location: SWMU 5

Date: 06/13/91



Photograph No.: 8

Orientation: North

Description: Product hydrochloric acid storage tank.

Location: Near SWMU 8

Date: 06/13/91



Photograph No.: 9

Orientation: Northwest

Description: Grinding sludge dumpster. MetalCrafters is awaiting removal by BFI.

Location: SWMU 8

Date: 06/13/91



Photograph No.: 10

Orientation: Northeast

Description: Dumpsters containing creosote flooring. MetalCrafters is awaiting disposal by PDC.

Location: SWMU 8

Date: 06/13/91



Photograph No.: 11

Location: SWMU 1

Orientation: Southeast

Date: 06/13/91

Description: Hazardous Waste Storage Tank. The four foot high berm surrounding the tank had an unplugged drainage pipe causing a spent acid release.



Photograph No.: 12

Location: SWMU 1

Orientation: Southeast

Date: 06/13/91

Description: Sodium carbonate used to neutralize June 7, 1991 spent acid release. The spent acid entered the soil via the drainage pipe at the bottom of the berm.



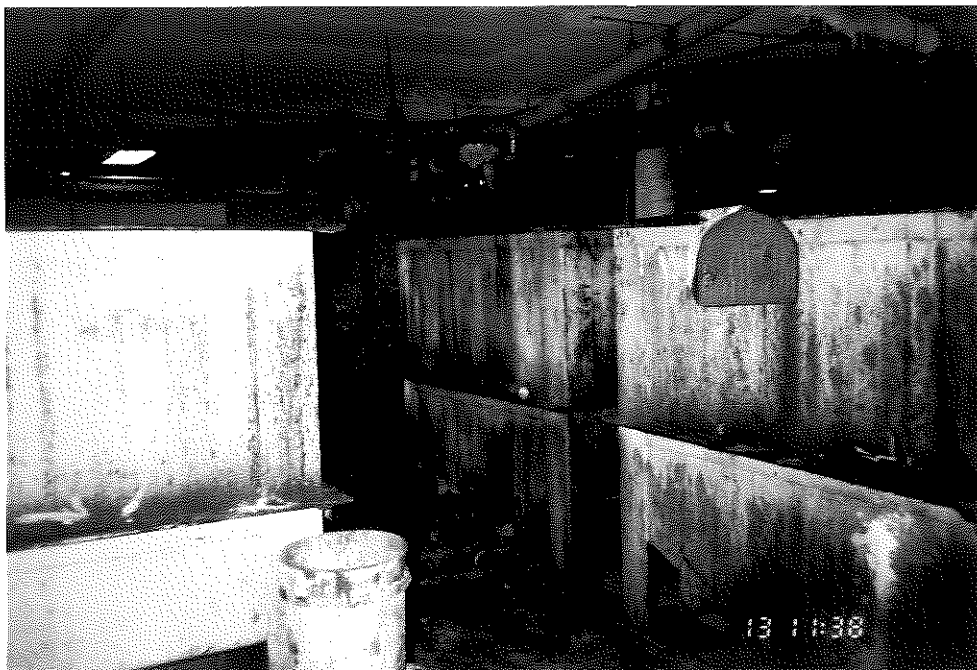
Photograph No.: 13

Orientation: North

Description: Phosphoric acid precipitation tank. The acid from this tank is pumped back into the phosphating line.

Location: SWMU 4

Date: 06/13/91



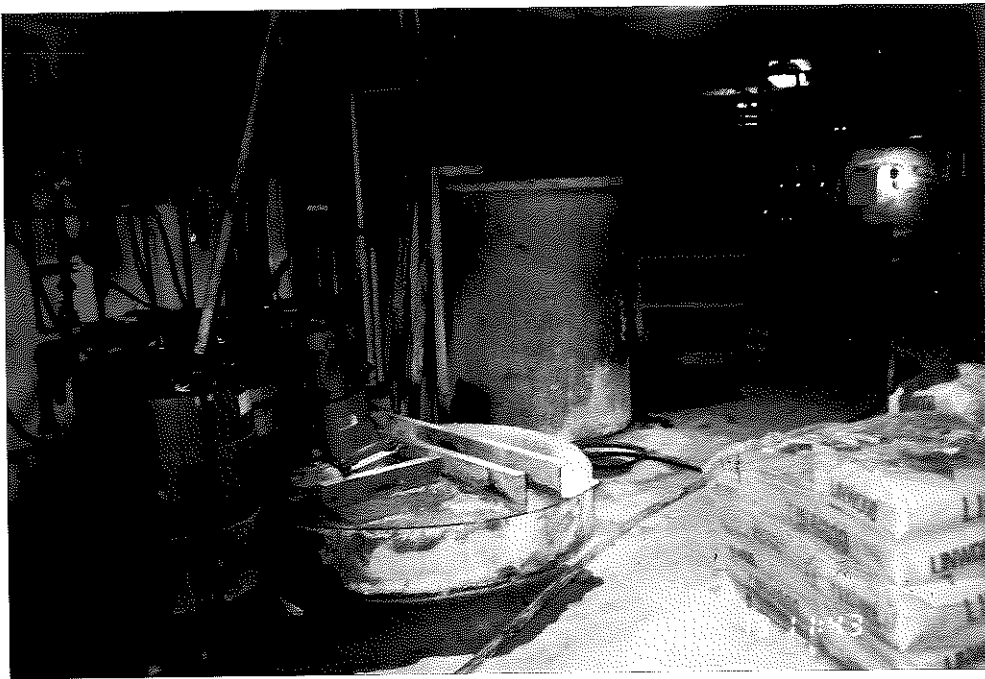
Photograph No.: 14

Orientation: Northwest

Description: Rinse water holding tanks from the phosphating line. The waste is treated before discharge into the sewer system.

Location: SWMU 4

Date: 06/13/91



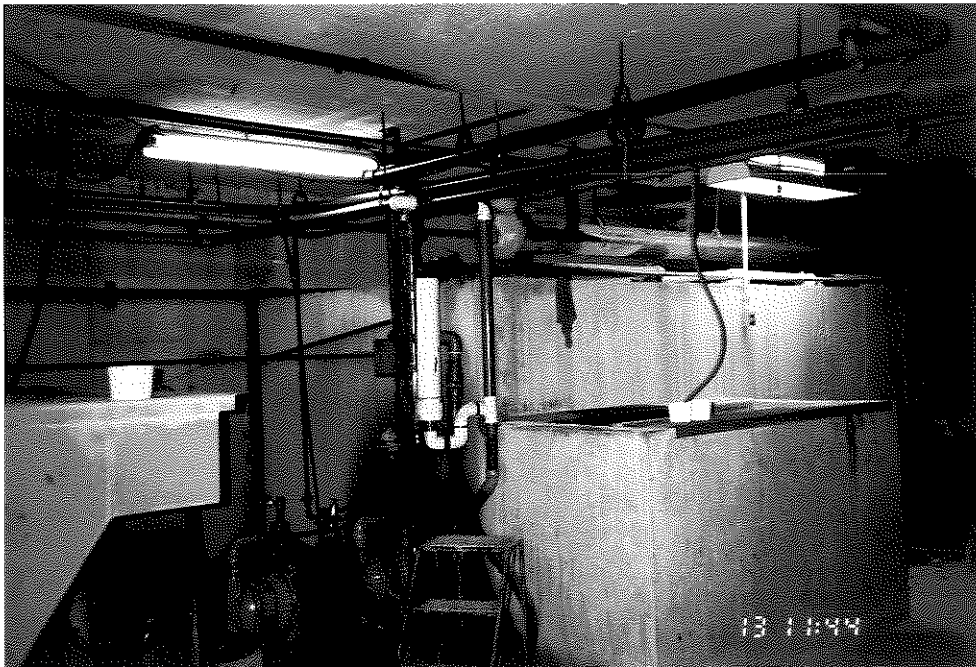
Photograph No.: 15

Orientation: East

Description: Neutralization tank (foreground) and flocculation tank associated with the Lower Wastewater Treatment Unit.

Location: SWMU 4

Date: 06/13/91



Photograph No.: 16

Orientation: Southeast

Description: Clarifier associated with the Lower Wastewater Treatment Unit. Note, the unit is surrounded by a concrete berm.

Location: SWMU 4

Date: 06/13/91



Photograph No.: 17

Location: SWMU 4

Orientation: North

Date: 06/13/91

Description: The stabilization tank associated with the Lower Wastewater Treatment Unit.



Photograph No.: 18

Location: Oil Spill Area

Orientation: North

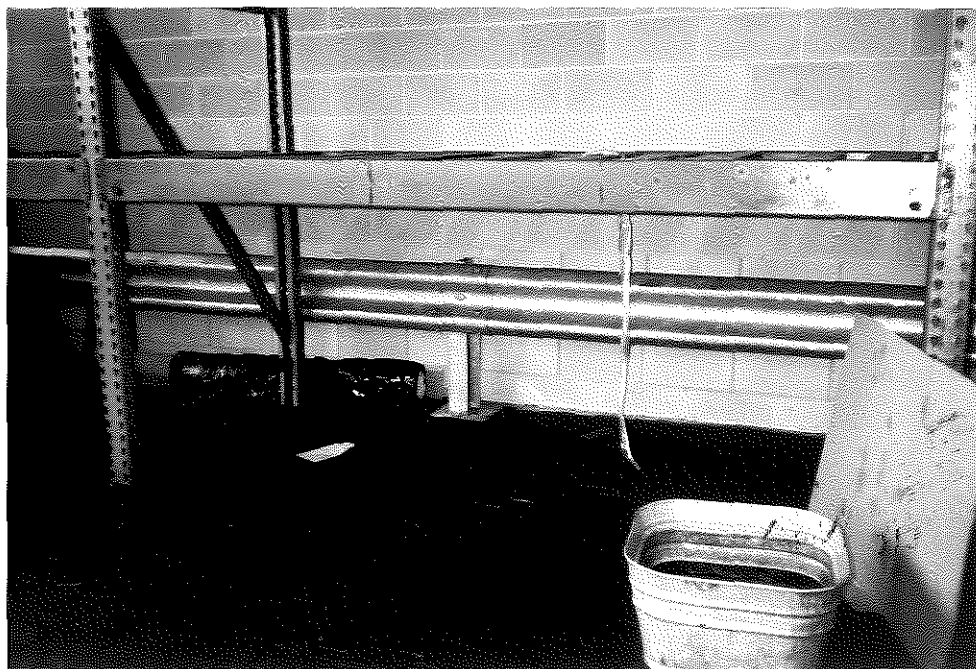
Date: 06/13/91

Description: Revegetated area where the April, 1989 oil spill occurred.



Photograph No.: 19
Orientation: East
Description: Waste Oil Storage Tank.

Location: SWMU 6
Date: 06/13/91



Photograph No.: 20
Orientation: East
Description: This area was used to store the cyanide plating waste. The container in the right foreground is a Waste Oil Satellite Accumulation Area.

Location: SWMU 7 and 10
Date: 06/13/91



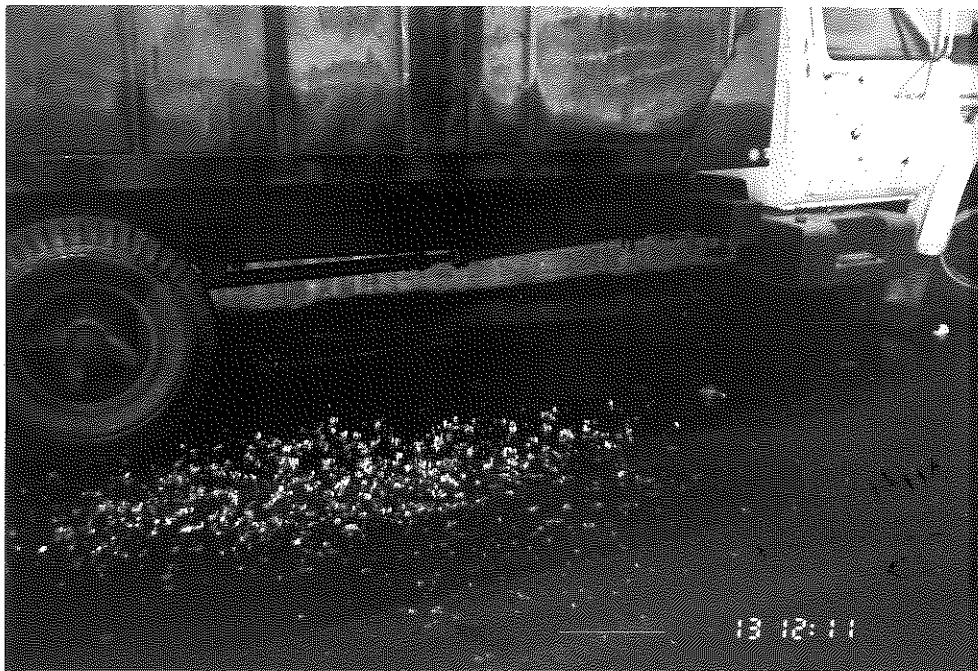
Photograph No.: 21

Orientation: West

Description: This area was used to store drums of barium chloride. Six inches of contaminated soil was removed in June, 1986.

Location: SWMU 9

Date: 06/13/91



Photograph No.: 22

Orientation: East

Description: Dump truck used to store scrap copper. Note, the oil pooling underneath the truck.

Location: SWMU 11

Date: 06/13/91

National MetalCrafters

1971 Sunny Hat 85°-90°

RAI Mike Gorman

G.P. Smith

Metalcrafters - Joe Zuzul

Metalcrafters manufactures fasteners for the auto industry.

Operations began in 1958

Began as National Lock

Fasteners → National

MetalCrafters →

MetalCrafters

KeyStone Consolidated

Bought the Facility in 1968?

Galt Industries

Purchased it in 1989

Metalcrafters

KeyStone still owns the building, Metalcrafters leases it.

1990 started Nickel Plating & Copper Bright-dip Operations

All wastes from this operation are treated in the WWTU also built in 1990.

Nickel cake is stored in bags & shipped out for treatment.

Env. Eng. Eva Cantu is

out for the day her daughter had a baby will have to call her

to get info. on spills

& permits. Zuzul knows

a acid spill on 6/7/91.

TCE is used as a degreaser, stored in same area as nickel cake.

ATTACHMENT C

VISUAL SITE INSPECTION FIELD NOTES

1. East Hazardous Waste Storage Area
2. East Wastewater Treatment Unit
3. East Nickel Filter Press
4. NW Copper Bright Dip Line
5. NE Nickel Plating Line
6. W Zinc Filter Press
7. S Zinc Cake
8. N Product Hydrochloric acid
9. NW Grinding Sludge
10. NE Creosote Dumpster
11. SE Waste Hydrochloric acid
12. SE Lime to neutralize Spill
13. N Phosphonic Acid Pump Tank
14. NW " " Rinse Tank
15. E Neutralization Tank WWTU
16. SE Clarifiers WWTU
17. N Stabilization Tank
18. N Revegetated Area oil Spill
19. E Waste Oil Tank
20. E Satellite Area for Oil & Cyanide Area
21. W Barium Chloride Storage Area
22. E Scrap Copper Truck, oil on ground

Waste oils are collected in various containers stored in 3,000 gallon Tank. Zuzul doesn't know who picks it up or any waste for that matter. He also doesn't know rate of production.

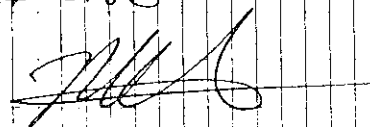
Wastes from zinc plating & phosphating operations are treated in WWTP located in the basement. Waste hydrochloric acid is stored in Tank outside. Zuzul doesn't know who gets picks it up.

Zinc cake is generated from filter press. Cake is stored in dumpster before disposal.

3 dumpsters outside
 1 - grinding sludge
 2 - Creosote blocks
 grinding sludge is from production
 Creosote blocks - flooring in the facility

While observing waste oil Tank, I noticed truck of scrap copper, oil was dripping off the copper, through the truck bed. Sewer drain is located 30' away.

Concluded VSD due to lack of info. by Joe Zuzul will have to call back Eut to get a lot of waste info.





ANALYTICAL REPORT

Mr. Randy Olson
FIW, INC.
P.O. Box 479
Pecatonica IL 61063

02-10-89

SAMPLE DESCRIPTION: Metalcrafters Neutralized Composite Soil Samples

Date Taken: SEE BELOW

Date Received: 02-06-89 1640

60221	3574-Sample A	02-02-89	1430	
	pH	11.87		units
60222	3574-Sample B	02-02-89	1430	
	pH	11.89		units
60223	3574-Sample C	02-02-89	1430	
	pH	11.58		units
60224	3574-Sample D	02-02-89	1430	
	pH	10.87		units

Tom Gartner, Manager
Rockford Division

ATTACHMENT D

SOIL SAMPLE RESULTS FROM HYDROCHLORIC ACID RELEASE

See Attachment III

G. Tests Performed, Methods and Results

1. Barium Storage Area - See Attachment I for location of sample sites.

<u>Location</u>	<u>EP Toxic Barium, mg/l</u>
W-1	0.13
C-W-1	0.16
C-E-1	0.10
E-1	0.01

2. Cyanide drum storage area - See Attachment II for location of sample sites.

<u>Location</u>	<u>Total CN mg/sq ft</u>
SCN-1	Below Detectable Level*
CCN-1	Below Detectable Level*
NCN-1	Below Detectable Level*

* Detectable level was 10 mg/sq ft

3. Spent Muriatic Acid Residual

pH 6.2

The pH analysis was conducted by MetalCrafters. All other analyses were performed by CBC-Aquasearch in Oak Creek, Wisconsin.

H. Visual Inspection During Closure

1. Barium storage area

No evidence of any spills around the storage area.

ATTACHMENT E

SOIL SAMPLE RESULTS FROM BARIUM WASTE STORAGE AREA